ABSTRACT OF THE DISCLOSURE

A memory cell in a so-called MRAM by utilizing a tunnel magnetic resistance in the prior art has raised problems that a magnetic field to be applied to a TMR element is essentially weak since a word line for write is disposed apart from the TMR element, that a large current is required at the time of a writing operation, and that electric power consumption is large. In order to solve the above-described problems experienced in the prior art, the present invention provides an MRAM memory cell structure and its fabricating method in which a word line for write is disposed near a TMR element and surrounds it in three directions.